

## The British Psychides (*with a plate*).

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The object of this note is to invite attention to a very interesting "group," or as I prefer to regard it, a "complete homogeneous group" of Lepidoptera, which, it would seem from the small amount of information available to the learner, has been much neglected in Britain. It is produced at this time of year, in order that the study may, perchance, incite the available entomologists—too old or too young for active service—to give their leisure to looking out for the cases of these insects.

I write as a learner myself. With the exception of the exhaustive treatment of the subject by J. W. Tutt (*British Lepidoptera*, vol. ii., 1900) I know of no serious attempt in the English language to grapple with this group. Readers of that treatise will recognise the author's characteristic effort to collect all available information, and his acknowledgment of the call for more energetic attempts to clear up the difficult problems connected with it.

The Psychides are a puzzling group of numerous species, evidently closely related and extremely difficult to separate. The study has been hampered by the prevailing idea of sharing them out between the Macro- and Micro-Lepidoptera, an idea slain by Tutt and to be buried by my study of the genitalia. Other efforts having produced but doubtful results, Dr. T. A. Chapman (whose investigations really form the backbone of Tutt's work) attacked the neuriation, the antennæ, and the tibial armature of the imagines. A certain sum of results was attained, but many questions remained unsolved, especially as to how many species are passing under the name of *Fumea casta* (? *nitidella*, *roboricolella*, *intermediella*, etc.), and how many as *Epichnopterix pulla* (*radicella*, etc.). Dr. Chapman has generously placed the whole of his material at my disposal for examination of the genitalia, in the hope that this investigation may afford a solution of the problems, with the sole stipulation that the whole shall be finally deposited in the National Collection at South Kensington. I am using Tutt's classification of the Palaearctic Psychides (*loc. cit.*, p. 481), which I regret is too extensive to reprint with this. My present notes do not profess to cull observations published since the work quoted, but rather aim at recording my own observations.

In all species of these *Psychides* the larval cases are of paramount interest and importance. Every specimen collected should, if possible, be preserved with its case.

The species with apterous females are of necessity extremely localised, being unable to travel far. Wind, water, carriage by animals and birds, cartage of crops, would appear to be amongst the means by which they are dispersed. This would result in the formation of colonies, and colonies of distinct races, even species, in close proximity.

The ideal method of collecting will be the gathering of the cases, when the full-fed larvæ climb up and attach themselves to stems, tree-trunks, fences, posts, walls, or rocks for pupation. There appears to be no great difficulty in keeping the larvæ through the winter or in rearing from the eggs, in metal boxes—not too dry. The season for collecting the cases will be up to the time of emergence. I hope that

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the accompanying plate will at least suggest the forms to be sought. The cases may be divided roughly into (a) cylindrical or trigonal (Tutt tabulates some 38 species), (b) rough (5), (c) faggots (about 50), (d) helical, and (e) transversely covered. There are no helical case species so far found in Britain.

(a) Cases cylindrical or trigonal.

*Narycia monilifera*, Geoff.—Emerges end of May until July. Female winged. I have taken both sexes, about noon, resting on hawthorn, plum, and other tree-trunks in my garden up to July 26th, often quite near the empty case. I have also netted the male at dusk.

*Diplodoma herminata*, Geoff.—June and July. Female winged. I have taken the rough double cases on posts and tree-trunks from May 25th to June 27th, towards evening, especially after rain, crawling upwards. But these cases do not appear to produce imagines until the following year. I am now (March) rearing the insects from the cases which have wintered in a metal box, kept damp, upon my study table. As all the cases from which the insects emerge are lying loose upon the sand, I assume that the full fed larvæ are not in the habit of climbing up to pupate. My larvæ fed on insects and weeds until September, when they spun up to hibernate. I watered them in November, when they all woke up and began feeding again.

*Solenobia inconspicua*, Stainton.—Late March to early May. I found large numbers of the cases and also imagines on palings, at Brentwood, 1886-7. Last year I found empty cases here on isolated posts in a field, and this year already I have found a lot of full cases on the same posts. The white heartshaped mark on some cases should be noted.

*S. lichenella*, L.—Of which no male is known. The female emerges early April to early May. Cases on old fences and posts, on walls and rocks. I have never come across this insect. Cases of *Solenobias* should be carefully sought and reared, as there are several other species known which may occur, or have been recorded as occurring in Britain. Specimens of *S. triquetrella* (♂s), *S. wockii* (?), *S. nickertii*, and *S. clathrella*, have taken their places in British collections. The cases are small and somewhat difficult to find, but patience and careful searching may well meet with their reward.

*Bankesia staintoni*, Walsm.—March, and even February. Of this species I have no specimen. The case is trigonal in shape, and covered with sand. On palings and trunks. Only recorded from near Southampton Water; flying not uncommonly near spruce firs.

*Bankesia douglasii*, Stainton.—“In the spring, a single specimen,” by Douglas, at Birch Wood.

*Taleporia tubulosa*, Retzius.—Late May to end of June. A large and tolerably well known trigonal case, on palings and trunks.

*Luffia lapidella*, Goeze.—Late June and beginning of July. When Tutt wrote, the male had not been taken in England. Case made of minute fragments of stone and lichen. On old walls and rocks.

*Luffia ferchaultella*, Stephens.—This probably common species is famous for its parthenogenetic powers. One is tempted to suppose that it is often confused with the previous species. The female (no male known) emerges in July. Stephens found it on old palings near Camberwell, and noted the activity of the larvæ during sunshine, and the

resemblance of the case to a diminutive specimen of *Turbo littoralis* (a small spiral land snail). This feature is very marked in the cases which I have found, produced by particoloured rings of lichen, laid on by the larva, as growth necessitates enlarged premises. I am told that Stainton's specimens of the case of this species preserved in the British Museum, does not agree with Stephens' description, but I have not myself examined it.

(b) Rough cases.

*Bacotia sepium*, Speyer.—End of June into July. Said to frequent woods. Cases on lichen-covered trunks and branches of trees. Probably could be beaten from such branches into an umbrella and collected from the débris as they come up to the surface. It is spoken of as gregarious, therefore once found there should be no difficulty in securing plenty of specimens.

*Proutia betulina*, Zeller.—June and into July. Case on lichen-covered trunks and branches, posts, moss covered walls, etc.

*Proutia eppingella*, Tutt.—Late June. I have no specimens of this insect. Mr. Prout found a few cases in Epping Forest. The case is described as intermediate between *P. betulina* and *Fumea casta* (?). They were found on a lichen-covered willow trunk.

(c) "Faggot" cases.

*Masonia crassiorella*, Bruand.—June and July. Should be looked for. It was recorded as British by Bond, Knaggs, and Mitford, and is accepted as a native. The case is larger than that of *Fumea casta* (?)

*Masonia affinis*, Reutti.—Recorded as a var. of the last species; smaller. The case is described as more bristly.

*Masonia mitfordella*, Chapman.—I have no specimen. There are no particulars recorded. Five specimens noted, all collected by R. Mitford. It is smaller than *crassiorella*.

*Masonia hibernicella*, Chapman.—From Fletcher's collection. No details or localities.

*Masonia subflavella*, Millière, and *M. edwardsella*, Tutt.—Are continental species which might possibly be found in Britain.

*Fumea casta*, Pallas.—How many species have we under this name? How far *nitidella*, *roboricolella*, *intermediella*, etc., are distinct, still remains to be proved. In examining the material in hand I find distinctions in the genitalia, which will have to be worked out. Generally speaking, the cases of the insect, or insects known by these names, are found up to June, the imagines emerging in mid-June and through July. Cases on fences, posts, tree-trunks, and on growing plants, bushes and scrub. The larvæ are very active during sunshine, quiescent at night. Cases from the Highlands of Scotland and from mountains specially desirable.

*Whittleia retiella*, Newman.—End of May and into June. The case of this very local little species is found on the saltings at the mouth of the Thames, upon a small salt-marsh grass. The finding of it requires much patience, and the expected bag always falls short of one's hopes. One case in a whole day's work may almost be reckoned as a success.

*Epichnopterix pulla*, Esp.—May and June. Another insect about whose identity there is much doubt. The case, which is covered with grass leaves, not straw nor tiny sticks, is not often found. I have, how-



33. *Masonia crassiorella* ♂, Bruand; T.A.C., Continental.  
 34. " " " " T.A.C., Locarno, 1899.  
 35 ♀ 36 ♂ *Masonia crassiorella* T.A.C., Continental.  
 37-38 ♀ 39-40 ♂. *M. affinis* (? var.), Reutti, T.A.C., Continental.  
 41. *Fumea casta* (?) Pallas, ? locality.  
 42-43 ♀. " " (?) Mucking.  
 44 ♀. " " (?) F. G. Whittle, New Forest.  
 45, 46, 48 ♀. " (?) Mr. Pearcey, nr. Bristol.  
 47 ♂. " (?)  
 49-51. *Whittleia retiella*, Newman, F. G. Whittle, Essex.  
 52 ♂. " " " " Essex, 1901.  
 53-56. *Epichnopterix pulla* (?), Esper, T.A.C., no loc.  
 57-58. " var. *sieboldii*, Reutti, T.A.C., no loc.  
 59-60 ♂. *Sterrhopterix hirsutella*, Hb., T.A.C., Continental.  
 61-64. *Acanthopsyche opacella*, H.S., T.A.C., Locarno, 1900.

### Bibliography of *Pieris napi*, its forms and close allies.

By H<sub>y</sub>. J. TURNER, F.E.S.

(Concluded from page 41.)

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